ISSTIP JOURNAL No. 5 December 1988

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ISSTIP

International Society for the Study of Tension in Performance

The International Society for the Study of Tension in Performance was formed in September 1981 in response to an overwhelming concern with the debilitating effects of anxiety and tension experienced by performers in many areas such as music, the theatre, the sportsfield, public debate and the like.

The objects of the Society are:

1. to foster research and related activities;
2. to collect and disseminate information;
3. to provide an advisory service for members.

Membership permits attendance at conferences at reduced fees; receipt of a Newsletter and the Journal of the Society which will contain information about the study of tension in performance; access to the advisory service.

Conferences and workshops have been organized from time to time in North America and Europe as well as in the United Kingdom.

Copies of past Journals, Nos. 1, 2, 3 and 4, may be purchased from the Secretary (£3.50 per issue).

The Society is based at the School of Music, Kingston Polytechnic.

Current Annual Subscription:
(1st January to 31st December)

Full membership £10.00
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Rates for institutional membership are available on request from the Secretary.

Should you wish to become a member of the Society, please complete the application form and send it with the appropriate fee to the Secretary.

Cheques (in sterling equivalent if applicable) should be made payable to: ISSTIP.

Editorial

In the ISSTIP JOURNAL No. 4 (November 1987) the editors announced that the proceedings of the 1987 ISSTIP International Conference on "Medicine for the Performing Arts" will appear in a future issue of the journal. The editors then commented on some of the highlights of the conference, on the valid points raised during the debates and in the various communications presented by experts in the field of medicine, psychology, the complementary medicine as well as during the demonstations and workshops conducted by performers themselves, or by teachers who have been involved in this area of study.

The editors regret that not all the presentations can be included in this issue of the journal because some of the speakers did not send a script and, mainly, because neither the audio nor the video recordings are available due to a mechanical fault. Thus no transcripts are possible.

A detailed listing of the events is published here to give those interested an idea of the range of topics debated and of the quality of the workshops which ran parallel with the debates.

Medical problems were discussed by: *Dr. Ian James* "To use or not to use drugs"; *Prof. Paul Turner* "Beta-Blockers and Anxiety in Performance; *Dr. F. J. Bejjani* "Ergonomics of Musicians and Dancers", *Dr. Howard Bird* "Body Flexibility in Dancers and Musicians"; *Mr. Hunter Fry* "Overuse Injuries in Musicians", *Dr. Richard Pearson* "Musicians Clinic"; *Dr. Leslie Findley* "Tremor and Musicians"; *Mr. M. Keene* "Voice Problems"; *Dr. John White* "Reasearch in Muscles"; *Mr. G. W. Bryant* "Dental Problems of Instrumentalists", *Mr. Justice Howse* assisted by *Shirley Hancock* "Dance Technique Injuries", *Dr. John Davies* "Sports Injuries and Wrong Technique", *Dr. A. W. Galbraith* "Music Students Problems"; *Dr. Wilfred Barlow* "Alexander Technique Principles" (showing a video of Paul and Linda McCartney). Other presentations in the field of complementary medicine included: *Christopher Connolly* "Feldenkrais Method"; *Robinne Comissiona* "Pulling the Energy Cord"; *Branko Bokun* "Humour Theraphy"; *Susan Balfour* "Relaxation Therapy"; *Francois de Menton* "Aqupuncture and Stress"; *Catherine Butler* "Counselling Music Students"; *Nancy Pears* "Anorexia Nervosa and Bulimia". *Jamie Challis* "Dietary Needs of Dancers". *Simon Costain* discussed the "Care of Dancers' Feet".

Psychologists were represented by *Jolanta Ossetin* "Psychological Aspects of Stress in Performance."

Dr. David Frampton gave a talk on "Performing in Hospices" and *Sylvia Lindsey* on "Music in Hospitals".

Performers and Pedagogues participated in Workshops, covering all aspects of performance: *Nestor Eidler* introduced the "Aberastura Philosophy" as a means of helping all type of performers with their problems; *Yfrah Neaman* conducted a workshop with string players while *Anthony Pay* worked with wind players: *Esther Salaman* talked about singers problems and *Enid Wexler on* "Remedial Voice Therapy" *Carola Grindea* conducted a Keyboard seminar assisted by *Dr. Robert Smith* on "Creative Motion "; *Dr. Guy Duckwork* on "Mirror playing to reduce tensions in piano technique"; and *Dr. Christopher Hepp* on "Piano Technique—a heuristic process"; *Dr. Ana Haun* "Meditation Technique and

Creativity" (published in ISSTIP Journal No. 4), *Elizabeth Haggenah* "Freedom through a Natural Piano Technique", *William Westney* "Coping with Tensions in Piano Playing."

Ans Samama gave a demonstration on "Muscle Control for Instrumentalists" and *Hilary Jones* introduced several "Research Programmes" including *Dr. Sandra Turner's* paper on "Tension in Hymn Improvisation".

A special workshop for actors was conducted by *Nina Finburgh* to demonstrate "young actors behaviour at auditions".

The editors hope that the articles and some of the short scripts published in this issue will show once again the need for more research, more co-operation between societies such as ISSTIP, academic institutions which train musicians, dancers and actors, and individual teachers and coaches working with performers and students.

There is still so much to be done.

BODY FLEXIBILITY IN DANCERS AND MUSICIANS

Introduction

Hypermobility of joints confers advantages and disadvantages. Although associated with an undoubted variety of rheumatic and orthopaedic complaints, joints that show an unusually large range of movement have been used with advantage over the centuries by performers on the stage, by certain musicians, by dancers and participants in certain sports.

This paper reviews the factors that influence the range of movement at a joint and the methods we have for scoring them. It then reviews some of the advantages and disadvantages before discussing specific examples as they apply to instumentalists, dancers and participants in sport.

Although "hypermobility" has found acceptance amongst physicians as a means of describing joints that show an usually large range of movement, the term "hyperlaxity" is to be preferred. The layman will probably prefer to use the term "flexibility", "suppleness" or even, in extreme cases "double-jointedness".

Factors that determine the range of movement at a joint.

The joint is a composite structure and several anatomical factors determine the observed range of movement. Different individuals will inherit slightly different bone structure. This may contribute to the range of movement, particularly at ball and socket joints. Thus an individual with a shallow acetabulum or "socket" will have greater range of movement at the hip or shoulder than an individual with a more deeply cupped acetabulum that will restrict movement by simple apposition of bony surfaces. The joint capsule and the ligaments around the joint are strengthened with callogen. The chemical composition of this varies from individual to individual and in turn, is inherited. Some individuals will inherit lax callogen structure allowing for a wide range of movement (extreme examples are found in the genetic anomalies of Ehlers-Danlos syndrome and Marfan's syndrome). Others will inherit "stiffer" callogen either because it has more cross-links or because it has a different amino acid structure. The range of movement at a joint is also a function of the stabilising action of the muscles around it. In turn their neurological servo-mechanism may be set at different levels to allow relative relaxation of the muscles or relative contraction. Relaxation can be acquired by regular training. Finally, the overall anatomical shape of the individual influences the observed range of movement. Tall thin individuals appear to have a large range of movement (when an arc is measured) than fat stocky people. In fat or muscular individuals, the range of joint movement may be limited by the sheer bulk of the soft tissue around the joint. "Flexibility" is thus an amalgam of several factors, some inherited and others acquired. Regular training procedures such as proprioceptive neuromuscular facilitation or even yoga, may influence the factors that contribute to acquired range of movement. The genetic factors will not be influenced, even by regular training, suggesting a need for initial screening of potential performers who may require joint hyperlaxity. These factors are reviewed in more detail elsewhere[1, 2].

Measurement of the range of movement at joints

The simplest device for measuring range of movement at a hinged joint such as the knee is an angle goniometer. For a ball and socket joint such as the shoulder or hip or a compound joint, such as the lumbar spine or cervical spine, a hydrogoniometer is more useful. If the range of movement at any given joint is measured in a large number of individuals it will be found to exhibit a normal or gaussian distribution throughout the population[3]. The majority of individuals will display a normal range of movement but, at one extreme, a small proportion will be unusually stiff and at the other, a small proportion will be unusually supple. More sophisticated devices have been designed for the closer study of the range of movement at individual joints. The Leeds hyperextensometer[4] is an example of a portable device that measures hyperextension at the metacarpophalangeal joint in the hands. The Leeds arthrograph[5] is a more sophisticated and less portable device that, by measuring the resistance to movement of a metacarpophalangeal joint that is driven mechanically in sinusoidal fashion, allows some interpretation of the factors that contribute to joint laxity.

A variety of authors have attempted to combine the range of movement at a large number of joints to give a "global index" of joint movement. The simplest and most universally accepted scoring system of this sort is that devised by Beighton (1973)[6] based on earlier work by Carter and Wilkinson (1964)[7]. This allocates a score of up to nine for each individual according to their ability to perform simple manoeuvres (Table 1). Although quick and easy to perform, inevitably this sort of global index only provides limited information. Conversely, sophisticated study of movement displayed at a single joint does not necessarily reflect overall movement at all the joints in the body. The future is likely to see more carefully devised scoring systems applicable to specific needs. Thus a more comprehensive method of scoring hand laxity might be of particular value in screening musicians; a more complex system of scoring shoulder, hip and spine laxity may be of more value for screening dancers.

Epidemiology of Hyperlaxity

Whatever the contributing features in any individual, certain general rules have been found to apply. Females are invariable more supple than males of the same age. The degree of joint laxity increases in childhood, is at a peak around 12-15 years and falls progressively thereafter unless it is maintained by regular training. It falls gradually with age unless degenerative joint disease occurs when it falls precipitously in the joints involved. There is often a diurnal variation in joint laxity. Joints display least movement early in the morning and most movement in late afternoon or early evening. Musicians and dancers may therefore have the greatest range of movement at their disposal during an evening performance. Athletes competing at an international level early in the morning will have to accept that their joints will not be at their most supple. This diurnal pattern is also affected by transmeridional flight and adequate time is required to acclimatise if an individual traverses several time-zones. Several authors have demonstrated a racial variation in joint laxity. Individuals

from the Indian Sub-Continent tend to display greater joint laxity than ethnic Africans who in turn display greater joint laxity than Europeans. It is likely that this is a reflection of inheritant collagen structure.

Disadvantages of Joint Laxity

Excessive joint laxity is now recognised as being associated with a wide variety of rheumatological and orthopaedic conditions[1]. Children with hyperlax joints develop unexplained pains ("growing pains") in the joints that display the greatest range of movement. Cramps and even joint effusions (e.g. "fluid on the knee") can occur. Extremely lax joints may be susceptible to spontaneous dislocation and hyperlaxity in the spine may be associated with spondylolisthesis. Orthopaedic complications of hyperlax joints include genu valgus, pes excavatum and flat feet.

Patterns of injury vary according to whether the joints are stiff or supple. Individuals with stiff joints, subjected to external mechanical strain, are likely to experience torn ligaments and tendons. Individuals with supple joints subjected to the same external mechanical strain are more likely to experience stretching injuries or dislocation. The risk of such injuries are reduced if a stiff person is trained to become more supple and if a supple person is trained to become more stiff by increasing muscular tone.

If there is incongruity of the joint surfaces (joint instability rather than joint hyperlaxity), premature osteoarthrosis may occur. This is a well established accompaniment of certain inherited disorders of connective tissue that are associated with hyperlax joints and probably occurs secondary to the graded trait of hyperlaxity in a normal population. If extreme laxity is present the osteoarthrosis may be complicated by pyrophosphate deposition disease.

In spite of the several medical disadvantages, countless performers have attested to the value of possessing hyperlax joints. By no means all individuals with hyperlax joints will develop any or all of these medical problems. The reasons why, for example, some families who have performed over the generations as circus contortionists, should not be susceptible to premature osteoarthrosis, are not fully understood[8].

Joint Laxity in Instrumentalists

A wide range of movement at joints in the hand may be an advantage. Paganini was said to have had hyperlaxity of the hands which, in turn, may account for the extraordinary difficulty of the works that he composed and that he played himself. It is likely this principle applies to instruments other than the violin. Amongst composer/pianists, Rachmaninov certainly had hyerlax hands as judged by contemporary accounts from his pupils. This may explain the wide hand span required of pianists playing his compositions which would clearly have been perfectly easy for the composer himself. It is likely that Liszt also displayed similar laxity though it is not clear whether he aquired this by regular training or inherited it. Pianists with small inflexible hands may feel more at home playing the rapid and close knit passage work that is typical of Mozart. Indeed, it should

be possible to predict when pupils are selected for training, which styles of piano writing they will find easy to play and which they will never master.

In keyboard players and in wind players, the two hands have fairly similar functions. This is not true of string players where although one hand will be required to stretch across the strings, the other will have much less strain put upon it. The bowing arm will, however, require a much greater range of movement at the shoulder if the player is to be successful. The most extreme stretch of the hand is probably to be found in classical guitar pieces. We have studied a class of classical guitarists at near professional standard and shown that the most successful were those with the most pronounced hyperlaxity in the hands. Unfortunately it was the hyperlax individuals who were most susceptible to injury[9].

The injuries seen in the hyperlax hands of musicians include traumatic synovitis and traumatic tendinitis. This may respond to rest but will occasionally require the use of anti-imflammatory agents or a judiciously placed intralesional injection of a soluble (non-florinated) steroid. Our experience does not suggest that hyperlax individuals will necessarily be susceptible to premature osteoarthrosis in the hands though, inevitably, a small number of musicians will come to acquire this as in the normal population. It is surprising that even patients with quite considerable hand deformity as a result of arthritis, still retain extremely good hand function and continue to play their instrument in spite of arthritis.

At a more mundane level, attention should be directed at factors that might reduce musculoskeletal strain in musicians whether they possess hyperlax or normal joints. The extent to which musculoskeletal rheumatism (soft tissue rheumatism or fibrositis) can be instigated by small changes in posture particularly in musicians who are subject to repetitive strain injury, has been underestimated in the past. We recently studied an apparent epidemic of neck problems in the violin section of an orchestra. A careful history showed that although such symptoms seemed to follow the performance of a Wagner opera of unusual length, they only occurred when the orchestra was performing in one of the three theatres to which the opera was taken on tour. A further history showed that the slope of the floor in the orchestral pit at this theatre differed from the slope of the pit in the other two theatres. This resulted in the string players having to sit in an unusual position in order to see both their music and the conductor. We were able to assure the management that they did not have an infective virus or a case of mass hysteria on their hands and that the problem could be averted by more attention to simple mechanical factors.

Joint laxity in Dancers

Opinions divide on whether the wide range of movement displayed by ballet dancers, particularly in the spine and hips, is acquired by regular training or is observed because auditions for ballet school deliberately select students who have inherited a wide range of joint laxity. Grahame[10], in comparing students at the Royal Ballet School with age and sex matched nurse controls, felt that the dancers had more inherent laxity. This was because the dancers displayed a wide range of movement, not only at joints where this was required, but also at others that were

not the subject of regular training. Thus most ballet dancers could hyperextend their elbows even though this was aesthetically attractive and discouraged by the ballet teachers. Conversely, a South African study[11] has failed to demonstrate this apparent inherent joint laxity in another ballet company. Dancers are subject to a large number of mechanical strains and the extent to which these can precipitate injury in individuals with certain join structure is discussed in more detail by other authors in this publication.

Joint Laxity in Sport

Although "flexibility training" will comprise a part of any self-respecting training programme for sport, a particularly wide range of joint movement at certain joints may be an advantage in certain sports. It follows that "flexibility training" is likely to be more important in certain sports than others.

Unlike instrumentalists, hyperlaxity of the hand is only occasionally required in sportsmen. One example is in cricket where spin bowlers often have a particularly wide range of lateral movement of the fingers. Indeed the prowess of spin bowlers from the Indian Sub-Continent may reflect their genetic tendency to have hyperlax hands. A wide range of hip movement would be advantageous to hurdlers and there is some anecdotal evidence that some of the best international hurdlers, presumably selected for this event because of dysplastic hips that dislocated easily, have gone on to develop severe osteoarthrosis at this joint. Flexibility of the spine may be an advantage in high-jumping and pole vaulting, particularly if the back is arched. For swimmers, the range of movement required at the shoulder is much greater for specialists at the crawl and butterfly stroke than for specialists in breast stroke. All swimmers attest to the benefit of warm water in increasing the natural range of movement of joints.

In spite of these obvious examples, a large scale radiological survey of retired female teachers of Physical Education in the age range 45-60 years, failed to show any greater prevalence of osteoarthrosis of the hip and/or ankle than in a sedentary female age matched control group[12]. Although there was no difference of statistical significance seen between these two populations (indeed the P.E. teachers seemed to have a trend to less osteoarthrosis overall), a few isolated individuals were seen amongst the Physical Education specialists who had particularly severe osteoarthrosis limited to a small number of joints. Further investigation suggested that one of the commonest reasons for this was a previous history of meniscectomy. Whether the mechanics had caused the osteoarthrosis or whether the hereditary defect in collagen structure that had predisposed to the need for meniscectomy had also contributed to the premature osteoarthrosis was not clear. Overall the evidence that repetitive impulsive loading accelerates osteoarthrosis does not seem particularly strong. Studies on groups of individuals who might be regarded as particularly at risk, such as free-fall parachutists, have failed to show any premature degenerative change in the spine or large joints of the lower limbs.

The sport in which hyperlaxity might be particularly advantageous is female olympic gymnastics. We have recently studied the British National Female Gymnastic Squad in training at Carnegie College of Physical

Education, Leeds[13]. The peripheral joint laxity of the 12 girls (mean age 15.4 years) who comprised this Squad, as measured by the Carter and Wilkinson scoring system, was found to be not significantly greater than the peripheral joint laxity of an age matched control group of 100 individuals who had received no specialist gymnastic training. Nevertheless, the gymnasts displayed a wide range in join laxity varying from 1 out of 9 to 9 out of 9 before training. The highest score was seen in the only non-caucasian in the Squad. Discussion with the national coaches responsible for their selection suggested that hyperlaxity was not one of the most important attributes sought during the selection procedure. Because hyperlax individuals were more susceptible to injury and because the coaches recognised that it was easier to train a stiff person to be supple than to train a supple person to be stiff, individuals with relatively stiff peripheral joints who in turn could develop much more momentum in the compulsory exercises, were to be preferred. In spite of selection of individuals who might not be susceptible to injury, 10 out of 12 members of the National Squad reported rheumatological or orthopaedic problems whereas only 13 out of 200 in an age matched control group of non-gymnasts had comparable problems. The most striking finding was the way in which the range of movement could be dramatically increased after a brief warm-up period highly tailored to the needs of each individual. After 10-20 minutes of such warm-up, the Carter and Wilkinson score was dramatically increased in each individual. This was likely to be the result of a combination of exercises to stretch ligaments and the use of techniques such as proprioceptive neuromuscular facilitation to alter the muscle tone.

H. A. Bird, M.D., F.R.C.P.
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Table 1. Carter and Wilkinson Scoring System

Passive dorsiflexion of the little finger beyond 90° (one point for each hand)	2 points
Passive apposition of the thumbs to the flexor aspects of the forearms (one point for each thumb)	2 points
Hyperextension of the elbows beyond 10° (one point for each elbow)	2 points
Hyperextension of the knees beyond 10° (one point for each knee)	2 points
Forward flexion of the trunk, with knees straight, so the palms of the hands rest easily on the floor	1 point
	9 points

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RELAXATION THERAPY

by Susan Balfour

The concept of relaxation is frequently misunderstood. It is often conceived of as a complete letting-go, flopping out horizontally and a total non-doing. This is certainly a true picture of deep relaxation, which is an important way of restoring one's vitality, but another equally important part of relaxation therapy needs to be understood as "tension control". In other words, minimising the tension in activity, or using the right amount of effort—not more than is necessary for the task, whether it is bowing a violin, playing the flute, singing, dancing or walking across a stage. It has been demonstrated by the cardiologist Peter Nixon that after a certain point increased effort does not increase performance—on the contrary, too much effort and performance level is diminished.

This concept needs to be explored with performers by their teachers and therapists in a very real and practical way. I shall spend some time suggesting creative ways in which this minimising of tension—or finding the right measure of tension—may be worked with directly.

One of the most useful approaches is to help the performers to increase their awareness of what is happening with their body. I see the performer's body as part of his or her instrument, and for the actor and dancer, of course, it is the total instrument of expression. So I have devised a number of exercises to increase awareness of tension and to reduce tension.

Why is it necessary to reduce tension? Firstly, because tension is tiring—a tense muscle is a working muscle using vital energy, thus unnecessary tension is a waste of energy.

Secondly, tension in the muscle feeds back messages of alarm to the brain, which switches on the fight or flight response—or the stress response, as it is sometimes called. This response causes many internal changes to take place in body functioning and in body chemistry which cause the individual to be at the mercy of unpleasant sensations. The individual becomes the victim rather than the master of his body. Relaxation techniques, and especially breathing techniques, can put him back in control.

Breathing irregularities and holding the breath commonly accompany excessive or unnecessary tension, and also feelings of anxiety and fear. Often hyperventilation may occur. This means the individual is over-breathing and blowing away too much carbon dioxide which causes the carbon dioxide level in the blood to drop and the blood becomes too alkaline. As a result muscles may go into spasm and the person may experience feelings of anxiety or dizziness and light headedness (a floating out of the body feeling), pins and needles in the fingers and tightness in the chest. In short, breathing wrongly can make you feel dreadful, and much attention needs to be paid by teachers to the breathing of their students. If the rhythm is irregular and there is too much breathing in and holding the breath, the breathing centre in the brain tries to compensate by forcing the breath out in a sigh—highly tense people do a lot of sighing. This sudden extreme expellation of breath causes a too sudden and extreme drop in the carbon dioxide level in the blood. So pupils need to be watched for excessive sighing and breath-holding. The ideal to be aimed for is gentle, low, rythmical diaphragmatic breathing. It is impossible to breathe calmly and feel anxious at the same time.

However, in approaching the question of performance anxiety we need to look at what is happening mentally and emotionally with a performer as "relaxation therapy" alone may not be sufficient.

Susan Balfour
Psychotherapist, Counsellor

BETA-ADRENOCEPTOR BLOCKING DRUGS, ANXIETY AND PERFORMANCE

The visible and subjective features of anxiety have been clearly described by pen and brush for millenia. Its essential role in preparing the organism for fight or flight has also been realised, together with the fact that greater degrees of anxiety become counter-productive, leading to impairment of performance, and even threatening survival. Careful anatomical and physiological studies over several generations have led to an understanding of the importance of the sympathetic nervous system in mediating the somatic manifestations of anxiety, but it was the development of analytical methodology to identify and measure the sympathetic hormone *adrenaline* in the blood of anxious animals and man that made possible more detailed research into its pathology and treatment.

In 1948, Ahlquist published his influential paper[1] suggesting that the affects of adrenaline in the body were effected though two types of receptor, now called alpha and beta. The important alpha and beta-mediated effects in anxiety are listed in Table 1. Pallor, pupil dilatation, rise in blood pressure, and shunting of blood away from the intestine are alpha actions. Increased heart rate, opening up of the airways in the lungs (bronchi) increased blood flow to the skeletal muscles and heart wall, and increased tone in skeletal muscles (associated with tremor), are beta actions. Mobilisation of energy in the form of glucose from the tissues is produced by both alpha and beta receptor activity.

Beta receptor blockade in anxiety

Patients with severe, often incapacitating anxiety frequently complain of symptoms referreable to their heart and vascular system, and of tremor, which are beta-receptor mediated. In 1948, at the time of Ahlquist's publication, no selective beta-receptor blocking drugs were available. When first introduced, they were intended to treat patients with ischaemic heart disease and rhythm disturbances. The possible value of propranolol in treating anxiety was discovered by chance when Turner *et al*[2] used anxious patients as controls in a study of its effects in patients with hyperthyroidism. They confirmed it in a prospective controlled study[3], which showed that the beneficial effects were predominantly on the somatic (physical) symptoms of anxiety related to sympathetic nervous activity, rather than the central (mental) symptoms such as fear. These observations were subsequently confirmed by other investigators[4].

Many people experience anxiety only in association with certain event or activities, and it may then interfere with their performance or even have harmful physical effects, for example on their blood pressure, cardiac rhythm or biochemistry. A series of investigations by several investigators have shown the beneficial effects of beta-blockers such as propranolol and oxprenolol in individuls experiencing anxiety associated, for example, with public speaking, driving a motor vehicle, and playing musical instruments[4].

Beta receptor blockade and performance

As soon as the possibility of therapeutic action in anxiety was raised, the question of the effects of beta blockade on mental and physical performance had to be answered. It was already known that beta blockers could impair exercise tolerance and increase skeletal muscle fatigue[5]. A series of studies by several investigators, however, failed to provide consistent evidence that various beta-blocking drugs in a range of doses, both single and repeated, produced significant impairment in different tests of psychosensory or psychomotor performance in normal young human volunteers under relatively unstressed laboratory conditions[6]. There were some exceptions, however, which suggested that some individuals might be more sensitive to their actions, in whom subjective and objective evidence of sedation and impairment of central nervous system function could be demonstrated, even at relatively low doses.

The possibility that individuals under stress might experience greater decrement of performance than subjects not under such stress was suggested by a study in young airmen about to take part in tests involving centrifugation[7]. They demonstrated somatic manifestations of anxiety in anticipation of these tests, and intravenous administration of a modest dose of oxprenolol produced a significant impairment in a tracking task to which they were subjected.

The interpretation of the results of such studies is difficult, however, because in many tests of psychomotor performance it is difficult to exclude a peripheral action of the drug on the nerve-muscle junction, rather than necessarily on the central nervous system. The implications for the performer, however, may well be the same, if quality of performance is reduced. It is also undoubtedly true that some patients treated chronically with beta-blocking drugs experience varying degrees, often quite subtle, of tiredness and sedation, which may "take the edge" off their enjoyment of life. Once again it is not easy to be certain if this is due to a direct action on the central nervous system, or is secondary to the well recognised effects these drugs may have on sleep, influencing both the time to fall asleep, and quality of sleep[8]. Interference with normal sleep, therefore, may lead to tiredness.

Conclusion

There is now little doubt that the judicious and carefully supervised use of a beta-blocking drug can reduce some of the unwanted, unpleasant, and counterproductive symptoms and signs experienced by patients with long-term anxiety or that associated with particular events or situations. They have important advantages over centrally-acting anti-anxiety drugs such as the benzodiazepines (e.g. diazepam) in that they do not produce the same amount of sedation in therapeutic doses, nor do they produce dependence or a troublesome withdrawal syndrome when abruptly discontinued[9]. They must not be used recklessly, however. Patients with anxiety may also be predisposed to bronchial asthma, or they may have chronic airways disease from smoking, and beta-blocking drugs can lead to serious bronchospasm in such patients. They can also produce troublesome coldness of the hands and/or feet, which may have undesirable effects in performance. For these reasons they should not be passed on

from one person to another, but only be taken under medical supervision. Because of the increased sensitivity of some people to their action, it is important that the appropriate dose is chosen only after the drug's effects have been experienced under such medical supervision.

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Table 1. Some alpha and beta adrenoceptor mediated effects of adrenaline relevant to the manifestations of anxiety.

Alpha
1. *Constriction of blood vessels in the skin leading to pallor and a rise of blood pressure.*
2. *Constriction of blood vessels supplying the intestine, making more blood available to the brain and muscles.*
3. *Pupil dilation.*

Beta
1. *Increased rate and force of heart contractions.*
2. *Dilation of the airways (bronchi).*
3. *Increased blood flow to skeletal muscles.*
4. *Increased coronary artery flow to cardiac muscle.*
5. *Changes in skeletal muscle tone (increases tremor).*

Both receptors
1. *Mobilisation of glucose (energy) from muscles and liver.*
2. *Inhibition of intestinal contractions.*

TREMOR AND MUSICIANS

Leslie H. Findley

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Normal (physiological) tremor occurs in all body parts. Most studies of tremor have concentrated on the hands and fingers which, for pathological tremors, are the most commonly affected and are the sites which cause the greatest interference with motor activities. Physiological tremor results from a complex interaction between central and peripheral factors including the natural resonance of the limb, interaction between the initial firing rates of motor neurons and the low pass filter properties of muscle, ballistocardiogram, synchronisation of motor unit discharge via stretch reflexes, supra-spinal influences and circulating catecholamines.

In a normal individual, physiological tremor is seen in posture and action, is around 8-10 Hz in the outstretched fingers and is barely visible. Physiological tremor may become enhanced in situations of stress and anxiety. The most common general mechanism for this to occur is by way of increased beta-adrenergic stimulation of peripheral beta-adrenoceptors from increased circulating adrenalin. This causes muscles to contract and relax more rapidly thereby conferring biological advantage in the "flight-or-fight" situation. This, with the increased synchrony of peripheral muscle spindle feedback, however, effectively results in an increase in amplitude of physiological tremor which can interfere with motor performance particularly when fine dextrous movements are required.

Essential tremor (ET) is a disorder which mimics enhanced physiological tremor in its appearance but occurs in patients who are not stressed and do not have a hyperadrenergic state. It is common, affecting up to 5% of the population. It is dominantly inherited and approximately 50% of patients give a family history of uncomplicated tremor. In general, ET, when well developed is of a lower frequency than enhanced physiological tremor and will interfere with motor performance. It can become further exaggerated in the same situations and through the same mechanisms that influence normal physiological tremor. It is unrelated to Parkinson's disease and other tremulous disorders.

The periodic nature of tremor lends itself to Fourier analysis. There are now available small spectral analysers which can be linked to miniature recording devices, such as piezo-resistive accelerometers, and allow one to define tremor in terms of its frequency components and amplitude. This has application in the differential diagnosis of tremulous disorders and a simple method of measuring the effect of tremorlytic drugs.

When it is necessary to reduce the amplitude of enhanced physiological tremor the drugs of choice are non-selective beta adrenoceptor antagonists, most commonly propranolol, in doses which give full beta-blockade (e.g. 40-80 mg). Maximum effect on tremor would be expected at about 1.5 hours. It is interesting to note that ET will respond to the same drugs, even though there is not a heightened adrenergic state. As a single dose, 120mg is usually recommended and in long term continuous therapy, propranolol 80mg three times daily or propranolol-LA 160-240 daily as a single dose is usually required. The exacerbation of

ET in anxiety and stress will also be prevented by beta-blocking drugs. Centrally acting drugs, unrelated to beta-blockers, such as primidone and phenobarbitone, may be effective in the control of ET.

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PERFORMING ARTS IN HOSPICES

David F. Frampton, M.B., B.S., M.R.C.G.P.

While most of this conference is devoted to the benefits medicine can bring by way of prevention and treatment to the performer in his or her working life, this lecture aims to demonstrate some of the opportunities performers can take to use their skills for the benefit of others who are under the care of the medical profession.

Patients who are confined to the hospital for one reason or another are usually deprived of any opportunity to experience live artists performances of any sort. In our case of dying patients in Hospices we are very aware of the needs to improve the quality of life of people in their last weeks or months. When they have already lost so much of this quality because of the restrictions created by their disease it is important that we look for opportunities to help them open up new horizons. One of the ways in which we have done this is to bring both creative and performing arts not only to the hospice, but where possible and necessary, to the patient's bedside. Many of our patients have neither the will nor the energy to move from the immediate area around their bed even if they are mobile, so simple laying on activities and performances in a Day Centre or Concert Hall is not enough.

Our prime source of musicians has been the Council for Music in Hospitals which has wide experience in providing concerts in hospitals and hospices throughout the country. They have supplied us monthly with suitable artists as soloists or small groups, who usually perform on the wards where beds are pushed back to the wall and mobile patients brought in. Because of this venue, piano accompaniment has not been possible and volume needs to be considered too. However, harp and harpsichord as well as smaller instruments have been manouvred around the wards.

The informal atmosphere and the inclusion of popular songs in the programme have led to audience involvement and stimulation and are much enjoyed by the artists too.

A further development has been to use solo instrumentalists even more informally on the wards. The musician is free to wander around the wards with some guidance from the nursing staff, and play to patients often sitting on the bed to do so. The pieces played are those chosen by the patient to a large extent and a music stimulated conversation often develops

ranging back into the patient's memories. This type of musical input clearly requires both a wide repertoire and an ability to play by ear.

We have also experimented with poetry against a suitable musical background, most of the poems having been written by patients. Dramatic readings of short stories highlighted by extemporary music has also been used and very effectively.

Performances in the Day Centre environment, though somewhat more structured have proved very enjoyable—music hall performers, flamenco dancers, dancers from the Royal Ballet, magicians, drama groups and school choirs and orchestras have all been used.

For those who are strong enough and interested enough have been able on occasions to make use of the wheelchair facilities of theatres, concert halls and the Royal Opera House to get the patients out to performances.

The benefit of all these performances are by no means one sided. Our visiting artists find that they receive so much from the patients and some have also found their professional skills stretched and developed they have performed in this unusual environment.

MUSIC IN HOSPITALS

The Council for Music in Hospitals gave its first concerts 40 years ago. We now visit every kind of hospital, home, hospice, day centre, etc. throughout Great Britain. The concerts take place in the halls, social centres, chapels, wards or by individual bedsides.

Concerts are given for psychiatric and geriatric patients and for mentally handicapped residents; also for profoundly mentally and physically handicapped young people, as at Queen Mary's Hospital for Sick Children at Carshalton which we visit five times a week, and the response is remarkable. Due to generous sponsorships, we are able to visit many hospices on a regular basis. There may be only five or six patients but it is our policy that no place is too small or too remote for a concert. The 150 concerts given at the beginning of our scheme have risen to over 1500 performances during 1987.

Here are some of the benefits which the music brings to the patients: there is the emotional release, stimulation, the new horizons which it can reveal, the joy of hearing "good" music, of being made to feel special by a live performance coming right to the hospital ward, while the calming effect, and the help which music brings is enabling patients to forget their pain. Above all, music is a valuable means of communication even with the most disturbed or apathetic. In the hospices, the relatives also appreciate having something which they can share with their loved ones.

The far-reaching power which music has to go directly to the deepest emotions places a great responsibility upon the artists who work with the sick. In addition to the nervous tension before a conventional performance, there are other stresses and strains. The musicians have to deal with situations which they would not encounter in the ordinary course of their professional lives. A different focus is required with the emphasis on providing a musical experience which is meaningful to the patients over and above a note-perfect reading of the score.

The unpredictability of hospital concerts can be stressful. Pianos may be terrible; with the audience all round the room, or out of sight. You may have to play in a corridor or noisy tea bar. The wide range of musical tastes means that the programme content has to be changed as you go along. Interruptions are frequent, with patients coming up to hold your hand or try the instrument. Staff, on some occasions, give out pills, try fire alarms, or serve tea!

This work can be physically and emotionally draining. There may be little obvious reaction at the time. Artists must cope with unpleasant sights and sounds—patients in pain, deformed or dying. It is sometimes difficult to gauge the correct level of the performance; or to remember that mentally handicapped adults are not children, although their intellectual horizons may be limited. Psychiatric audiences may be unable to concentrate or sit still. Sometimes an audience of mixed disabilities can provide the greatest problem. In hospices it can be disturbing for the artists to feel that their music has reduced the audience to tears, although the doctors welcome this emotional release.

It requires experienced artists to deal with these challenges and uncertainties; to be able to overcome all difficulties and still perform with confidence and enthusiasm. They must be able to talk informally about the music, to play from memory so that they can move among the audience and, where necessary, to transpose and extemporise. By their presentation they must be able to reach out to the audience, to encourage participation and to bring warmth and happines—and their repertoire needs to be almost limitless!

The way to deal with the stress of giving hospital concerts is to remember that the patients' needs are paramount. All tension and nervousness must be submerged by this thought. Difficulties are surmounted by forgetting yourself, your technique and your own performance and concentrating on the wish to share with the patients the joy of the music. As one artist said, "I count it a privilege to have been given the opportunity to provide moments of happiness. Applause, recognition, money, mean nothing in comparison. Working in hospitals has been, without hestitation, the most important part of my musical career."

Sylvia Lindsay
Director, Council for Music in Hospitals

COUNSELLING MUSIC STUDENTS

Professor Anthony Clare, the professor of Psychiatry at St. Bartholomew's Hospital wrote in an article in the *Listener* on 6th August "In our exhuberant glorification of personal achievement, the top position in the heap, what value, if any, do we place on the ability of an individual to maintain a decent, balanced standard of functioning in many areas of personal life while manifesting an outstanding level in one of them? Does no remnant of Renaissance man (or woman) remain, no shadow of the fully rounded individual fall across the armies of single-minded, hard-eyed self-centred ambitious young tigers massing at life's starting post? W. B. Yeats' father John, was fond of claiming that "a gentleman" is a man not wholly occupied with getting on . . . Who will make J. B. Yeats still pertinent point that being fulfilled in this life is not the same as being successful, that being successful is not the same as being fulfilled?"

The British Association of Counsellors defines counselling as follows: "When a person occupying the role of counsellor offers or agrees explicitly to give time, attention and respect to another person in their role of client. The task of counselling is to give the client an opportunity to explore, discover and classify ways of living more resourcesfully and toward greater well being. The boundaries of time, usually over several meetings, are an important integral part of counselling and the attention of the counsellor who is free of his or her own personal environmental preoccupations, is able to open herself to the clients communications and engage actively with him in his personal explorations. The counsellor respects the client's potential to be creative for himself, and to make his own value choices in the light of his own particular cultural social and political background."

In this completely non-judgemental environment respect includes privacy, confidentiality and the freedom to focus on feelings, thinking and behaviour within the unsatisfactory areas of the clients life and to clarify personal meanings and objectiveness and clients to experiment with new ways of being.

When we cut ourselves we bleed, but as long as the wound is kept clean, given the right protective environment it will heal naturally, thanks to the physiological mechanism of the body. A similar mechanism exists in the mind and counselling provides the healing environment and support to the client. By learning to understand and accept himself and his needs he can then begin to create for himself a more satisfactory life.

In Britain and USA the majority of universities and colleges of further education have a counselling service. Educationalists have realised that if the student can work through and solve problems of personality, relationships and family background as a student he will avoid reaping the emotional whirlwind later during the midlife crisis when both family and career are badly affected. Standing alone the adolescent at college is forced to face himself and his world under new stresses and it is hard to deny or escape problems which might be tacitly ignored in the family. At this age, before he becomes set in his attention and emotional habits, before he has begun long-term relationships or career, he is at liberty to change, to get himself sorted out.

I am both a performing musician and a counsellor. I am an oboist working freelance with my own group *The Sheba Sound* which I have run for twelve years and I have spent the last six years completing part-time several different kinds of counselling qualification including the London University course in Student counselling. My approach is eclectic ranging from the technique of Carl Rogers to the traditional Psycho-Dynamic school and then to George Kelly's Personal Construct psychology. I use whatever works, whatever proves useful and is appropriate for each particular client. I know the problems of peforming, teaching and being a parent as I have adolescent children of my own. At the Guildhall School of Music and Drama, I work closely with the Health and Welfare organiser and Dr. Alan Galbraith, the college physician who deals not only with the physical but also helps with psychiatric referrals. I frequently refer clients to the Alexander technique instructor and I also help to teach the Music Therapy students.

How do music students differ from my other clients at a Technical college, who will be carpenters, engineers, caterers and beauty therapists? After all, they too are all learning a practical skill. Music students have the same major problems for this stage of life, which are those connected with the successful separation from the parents, finding their own individual identity, ideas, sexual and emotional needs and feelings. As a child, their mother as the carer was the main emotional support; now it is the father, "the doer" who is used as the role model, the protagonist. Without his example, love, encouragement and support,—the adolescent of either sex finds standing alone and finding the confidence to make his or her way in the world very difficult.

Anothony Storr, lately Professor of Psychiatry at Oxford University, a fine pianist as well as a distinguished psychotherapist wrote in his book "The Dynamics of Creation": "Most authorities who have studied creative people agree that their most notable characteristic is independence. This shows that they are much more influenced by their own inner standard than by those of the society or profession to which they may happen to belong". Not all music students are what might be described as artistially creative, but those who are artisan musicians share this inner obsession to reach their own level of perfection. This means long hours spent alone every day practising, which is certainly detrimental to both their social life and close relationships. It is a physical as much as a psychological need, since they feel unwell and uncomfortable if they cannot play. In Freudian terms it is the *id*, the creative instinctual child who needs to play, which is the most powerful part of their psyche. The toy with which the child is entirely absorbed and obsessed, is the musical instrument and the sounds that come out of it. They identify, each with his particular instrument as part of the self. After all, an instrument is only a tool but it symbolises so much more. It is worth taking note that recent research into drug and alcohol depencency has shown that those with obsessive personality traits are most vulnerable to addiction and this should be taken into account when prescribing drugs of any kind to music students.

It is very hard for many of them to see themselves as just a valid individual as *John* or *Mary*. They only feel "real" as a fiddler, singer, pianist or flautist. Remove the instrument through ill health or theft or failure,

and the music student experiences massive anxiety, depression and loss of identity—they cease to exist. There are few sporting faculties or choice of societies to develop external interests and hobbies at a Music College. This exacerbates the narrow outlook of these students. As counsellor a lot of my work is in helping the students to realise that, although the musical part of him is an essential ingredient of his personality, it is only part of a much larger whole. If he can get in touch with, and discover the unknown surprisingly rewarding and interesting parts of himself he has not yet used, he naturally develops a broader view of life. The problems of his profession fall into a proper perspective against the wider background of his experience and his art can only flourish through the cross-fertilisation of ideas taking place within him. I have yet to meet a music student who had music as his only artistic gift. They are bursting with enormous physical energy and are usually intelligent and very practical people. However, most important of all—they have intuition. This has been matured and developed through constantly working with music, which is, after all, emotion in sound. As a counsellor this quality makes my job so much easier compared with the work I do with non musicians. The music student finds himself in an institution whose aim is to produce the best musicians in the world. The atmosphere is of constant competition and consequently an atmosphere of hysteria and high anxiety. The exact figures are unknown but I estimate that only 15 or 20 per cent will actually survive to have a career within this increasingly overcrowded, underfunded profession. They need great talent, perseverence and courage to succeed. Musicians are only too aware that they are not an economic necessity although they may be a cultural and spiritual one.

Music students are taught individually, not in groups like other students and thus an intense relationship with his professor is crucial to a student's musical success. As a counsellor I am not a member of staff. I must stand alone guarding the confidentiality of my student clients. This is the vital element of trust without which I could not function and the fact that I cannot divulge anything to a professor without the student's consent has to be understood and respected by his teacher. This means that I must win his trust and not be seen as an interfering competitor, but as an aid, to free the student of emotional blocks so that he can learn and develop. The professors, who tend to share the same obsessive personality traits as their pupils, identify strongly with their pupils' success or failure. They need reassurance in their teaching role. We must remember that many of them are leading very stressful lives as performers. With the students permission and the co-operation of the professor, marvellous psychological and emotional separation can often be achieved by "musical parenting". Through a good caring relationship with his professor the student can have the love and trust he was unable to have in his family.

I run a group, sponsored by the Students Union—which meets once a week—for students who suffer from performing anxiety. I used one particular group in the autumn term of 1985 as subjects for my research project into *anxiety in musicians* and I would like to relate three short case histories from this to illustrate the kind of problems with which I am constantly faced. This group is run on the principle that musicians are very independent and prefer to "Do it Themselves". I give them the

responsibility to use the group, the discussions, the self hypnosis technique, self-awareness and self-assertion exercises and performance, to be their own analyst, their own detectives searching out their own particular cause to their problem with performance anxiety. Nearly all succeed—and those who don't, usually agree that keeping this problem is safer and more useful than losing it from their emotional lives. There were 13 student in the group of Autumn Term 1985. Five of these had histories tainted by deaths within the immediate family,which took place before they were born. These young people were carrying anxiety, referred anxiety which came from the powerful unconscious unspoken messages of their families. We worked through grief and fear which is handed down from one generation to the next.

"The baby experiences the loss of his mother as a threat to his existence, and it is this primordial fear that is reactivated at the loss of the closest person. Every significant death may bring in some sense a repetition of this anxiety." (in Lily Pincus "Death and The Family").

1. Thomas

He was a postgraduate student—tall and smiling, with plenty of charm. He only spoke in the group to report negatively on his task or a group exercise. He seemed the only member not to have benefited in any way, and when I told him this in his interview he was quick to explain.

"My father was the second of three sons. Their father died of a brain haemorrhage when they were very young. The eldest son was drowned in the village pond at the age of five and the youngest died of meningitis soon after. That left my Dad, his sister and mother, my Gran. Dad wanted to be a professonal singer but had to go down the mine for economic reasons. He married my Mum, they're very happy, but she too had to sacrifice her ambition to be a techer, to stay at home and help her sick mother look after all the many younger children. She and I are both nervy (she carried her husband's anxiety), and very close to one another. My Dad is very outgoing and sociable and conducts all the local choirs, but he's had two nervous breakdowns. I took time to settle into my primary and comprehensive schools, I was nervous of the more aggressive element. In the local county youth orchestra I was afraid they'd call me a bighead. I got very nervous playing in a concert and my instrumental teacher at university suggested I took these pills. They were wonderful, I wouldn't play without them now". He found the superior technique of the students at Music College daunting, but interestingly he said, "I don't feel a desperate need to practise technique as I know I can always take a pill. The Group made me think and question things". He is now playing in a provincial orchestra.

2. Pauline

Pauline was a second year student of considerable talent, with plenty of the sporting qualities of character to make an excellent performer. But she was the only daughter of two frustrated performers. Her father was now in administration, her mother a secretary. In the Group she showed the most immature behaviour, constantly giggling and whispering to her

neighbours while other students were talking. Her individual interview showed both her awareness of the role her parents had given her, and her defence system against her anger towards them, which began when she was separated from them by being sent to a specialist music school at the age of eight.

"My parents were both musicians, they were very critical and not thoroughly accepting. They dislike me disagreeing with them, they dislike being answered back and they think I should have given them more respect. They pushed me—I was affected by my parents, they sent me to a specialist music school from the age of eight. I'd have been a linguist if I wasn't a musician? My parents would be disappointed but they'd let me. (Having been separated from them at boarding school, she had had little opportunity of working through her adolescent rebellion and separating from them in a natural way). Music brings out the self-centred streak in me. If I'm not well prepared and play badly I feel depressed; if I prepare I enjoy it.

"After the Group I felt differently about the audience. (She had been projecting the critical parent onto it). Now I'm aware other people are the same as me, but I'm still wary about what they are thinking. (Other students were seen as competitors). I don't think that my problem is as bad as theirs". She repeated this several times during this interview. She has since won several national competitions.

The anxious child with a mission—
The role-giving ambitious parent

"It may perhaps be that the person whose anxious dread has shattered the mythical reality in which we are taught to believe has caught on to a truth which the rest of us are desperate not to acknowledge and for which there are almost no words to provide an understanding." (David Small, "Illusion and Reality").

This problem was the most complex one in the Group. The students had been taught a mythical reality by their parents—that to become a successful musician was the apex of achievement, the way to gain parental approval and love. However, by the time they reached the Music College they were beginning to catch onto a truth, that they must, in order to gain success, also get in touch with their anxiety, guilt and anger. They are faced with a terrible dilemma.

Their natural right to choose their own career was appropriated, stolen by their parents when they were very young. For them as adolescents, this loss of part of their identity makes separation very difficult, They can defy their parents, refuse to study music, but they are also denying themselves their natural desire to realise themselves as artists. If they meekly do what is tacitly or openly expected of them, they have subtly lost an important part of themselves, the independent adult. They must contain or somehow express the anger this engenders, and it seems to be frequently shown as depression or as a kind of smouldering resentment against the parents. "I am the successful one in the family. I came near the top in class at school so I must do well".

The angry child—the indifferent or disapproving

"The Gift must be appreciated, valued in the family. This role is sometimes given to another member of the family so the child feels guilt and anger at not being recognised." (Peter Blos "On Adolescence").

There were three girls in this group who were very conscious of their tremendous frustration and anger with their parents, either with the parents verbal disapproval and lack of support, or the desolation given by the indifference of the father and ambivalence of the mother. They felt that they had been given an inferior role in the family, they hardly existed, their achievements had no significance.

3. Brenda

Although Brenda wore plain, butch, no-nonsense clothes and looked like a young maiden aunt, with her hair scraped back, and wearing no make up, she had an eager warmth and enthusiasm which was at once disarming. A postgraduate student from the Commonwealth, she had left a good job and income to follow her dream.

"I came here to study after taking a Maths degree and working for five years as an industrial relations officer. I am a feminist and believe that women should be in senior jobs, which was where I was heading before I realised that I wasn't using the whole of myself. I wanted to develop my musicianship.

"My parents are proud of my brother, who is a musician, but they were not particularly interested in what I did, as long as I earned my own living. My mother is musical, but not as passionate about it as I am. My father is a Physics professor, he's always working, he doesn't like to go deeply into things. I admire and love him but I don't like him. I don't want to lose this essenial world of music. I react so strongly to the idea of succeeding or failing in it. I always seem to end up with men who see my career as a threat and won't accept me as I am. It was lovely in the Group, to be accepted and to be given the confidence to make friends."

If a musician is carrying anger, fear or guilt he is blocked and unable to communicate emotion though his music to his audience. (I can diagnose this within a dozen bars of a performance). He cannot play if he is filled with terror, the fear which he himself is creating by projecting critical parents or teachers onto his friendly audience. The energy and healthy aggression so badly needed to perform are turned against himself.
J. B. Yeats made the point that "being fulfilled in this life is not the same as being successful and that being successful is not the same as being fulfilled." I spend my life as a counsellor making this point, and also emphasize it as a musician. If the young musician can use his talent, energy and intuitive intelligence not only for his music but to explore himself, others and the world he inhabits he can enjoy both success and fulfillment. My role as counsellor is to help him to utilise his feelings, fire him with curiosity and inspire him to search, to question, to be excited by the mysteries of our existence internally. I open the door.

Catherine Butler
Counsellor at the Guildhall School of Music and Drama and a performing musician.

PSYCHOLOGICAL ASPECTS OF PERFORMANCE ANXIETY:

PART I—PERSONALITY CHARACTERISTICS

(Part II—Psychological Therapies—will be contained in one of the future issues of the Journal)

The number of psychological studies investigating performance anxiety in professional performers and performing arts students is very small to date, but there is a large body of research in the fields of social personality and clinical psychology, as well as in the test anxiety area, the findings of which could be usefully employed to the understanding of the sources of performance anxiety, to the indentifying of particularly vulnerable individuals and to the predictions of effectiveness of different therapeutic approaches. The aim of this paper is to present some selected findings on individual differences, commonly referred to as *personality*, which have been found to be associated or are likely to be associated with increased levels of performance anxiety. Possession of certain traits may predispose some individuals to reacting more severely to stresses in general and to performance anxiety in particular.

The term *personality* refers to an individual's relatively stable way of responding. It is a matter of ongoing dispute and research As to how large a part in personality is played by genetic endowment and how large by the environment, and it is generally assumed that there is an interaction between the two. It is also not clear how persistent in time and how amenable to change various personality characteristics are.

The personality traits of relevance to performance anxiety to be discussed below are: *trait anxiety, neuroticism, inhibition of emotional responses, low or uncertain self-esteem, self-handicapping, locus of control, self-efficacy beliefs* and *optimism versus pessimism.*

Trait Anxiety denotes relatively stable individual characteristics in anxiety-proneness, i.e. a tendency to respond to situations perceived as threatening with elevated *state anxiety.* In psychological research the most widely used assessment instrument is the Spielberger State-Trait Anxiety Inventory (Spielberger et al, 1970). An individual may have a high trait-anxiety in certain, but not necessarily all, areas of life. Some people, for example, are inhibited and often painfully shy in social situations. They are said to be suffering from social anxiety, associated with fear of social evaluation. Anxiety within the social evaluation area appears to predict strongly the amount of anxiety in the fields of academic examinations, job performance of executives and athletic competition among sportsmen. Similar finding has been reported for arts performers. In a recent study among professional and amateur musicians and music students *individuals with greater general fear of social situations and crowds suffered from greater performance anxiety* (Steptoe and Fidler, 1987).

Neuroticism is a personality trait which predicts the presence of negative affect even over a follow up as long as ten years (Costa and McCree, 1980). People high on neuroticism tend to have a pattern of thinking which undermines their sense of worth and ability. They recall more negative

information about themselves than about others. The more positively they view others the lower their self-esteem becomes which serves to maintain their neurotic condition. The already mentioned study of Steptoe and Fidler (1987) showed that among musicians performance anxiety was strongly associated with neuroticism.

Inhibition of Emotional Responses may be associated with performance anxiety through its effects on physiological function. Psychological experiments demonstrated that people can be divided into *Natural Inhibitors and Natural Expressors* of emotional responses. Natural inhibitors appear to be reacting to threat and stress with *more severe physiological responses* than natural expressors (Notarius and Levenson, 1979). This would lead to prediction that individuals who are inhibitors may be more likely to suffer advserse consequences of performance anxiety on their health than those individuals who express emotions more freely.

Self Esteem, like neuroticism, appears to be a relatively stable personality trait, though individuals may have low self esteem in some areas of life, but not in others. Psychological studies have shown that people with LOW self-esteem *do significantly worse* in achievement settings (e.g. Shrauger, 1972) than people with high self-esteem. The poor performance in turn sets the stage for continued self-criticism and maintains further the low self-esteem. However, research shows that this vicious circle can be broken. When low self-esteem individuals are instructed to concentrate on details of the task in hand and to shift the attentional focus from themselves to the performance, their performance improves considerably (Brockner, 1979). HIGH self-esteem, on the other hand, does not always predict success. Among HIGH self-steem indididuals two groups have been identified: *Genuine* or *Certain* and *Defensive* or *Uncertain* (McFarlin and Blascovich, 1981). *Genuine High* self-esteem persons are not threatened by negative performance feedback, and because of the stability of their self-evaluations they have low needs for approval. Such individuals are usually found to exhibit *least performance anxiety.* But the *Uncertain High* self-esteem people have high social desirability needs and are therefore anxious about the feedback. This may have adverse effects in a performance setting and people with this trait would be predicted to suffer from *greater performance anxiety.* Also, psychological studies in a related field of test anxiety demonstrated that indiviuals with uncertain high self-esteem are among those who are likely to engage in *self-handicapping.* This term refers to "any action or choice of performance setting that enhances the opportunity to externalise (or excuse) failure and to internalise (reasonably accept credit for) success" (Berglas & Jones, 1978, p.406). Self-handicapping can be set in advance and includes the use of drugs, alcohol, sleep deprivation and not practising enough. Even when none of these conditions did occur, verbal claims to that effect following a performance serve the same purpose. Failure is less likely to be attributed to low ability of the individual *becausee* of the handicapping circumstances surrounding the performance, and success is more likely to be attributed to talent of the individual if s/he did well *despite* the difficult circumstances. The setting up of self-handicapping conditions may be in fact quite common among

students of performing arts. Some teachers can cite examples of those among their students who seem to be sabotaging their own performances, and acting in a self-defeating manner, often subconsciously (personal communication). It needs to be realised and appreciated that *performance anxiety also functions as a self-handicapping condition*, particularly among the students of performing arts. Being known to suffer from considerable performance anxiety, making it known to one's teachers and one's peers, and in fact genuinely suffering from it has a protective value to one's uncertain self-esteem, so that attributions for less successful performance will be made to the "nervousness" rather than a lack of talent. Implications for a successful therapy with self-handicapping individuals are that it is necessary to *raise their levels of self—esteem* and to *induce them to abandon the protective shield of this, often unconsciously applied, strategy.*

Locus of Control is a personality trait which describes a person's style in dealing with his/her environment (Rotter, 1966). Persons with *internal* locus of control feel that thy are in control of themselves and their environment. The opposite holds for the *external* locus of control individuals, who see themselves as being at the mercy of other people and factors beyond their control. The latter type of person fares worse in many areas of life. Among a sample of people with chronic anxiety disorder those with external locus of control were more depressed, more indecisive, had higher trait and state anxiety, were lower on social adjustment, and their therapeutic outcome was poorer because of their more passive attitude to treatment (Hoehn-Saric and MaLeod, 1985).

Although to my knowledge no study has been carried out on locus of control among public performers, it could reasonably be hypothesised that individuals with external locus of control would both suffer from greater performance anxiety, and have poorer prognosis for overcoming it.

Self-efficacy belief refers to a belief a person holds about being or not being able to succeed on a given task (Bandura, 1982). This belief does not always match up with the reality. Exaggerated notions about one's level of mastery may be socially irritating, but are not psychologically damaging to the individual who hold them. It is more common, however, particularly among young performers, that the beliefs in one's ability to succeed are lower than it is justified. The destructive thinking processes associated with performance anxiety centre mainly around the themes of doubting one's level of ability, one's technical and expressive skills and one's sufficient mastery of what one is going to perform. Low self-efficacy expectancy often acts as a self-fulfilling prophecy, and reduces the quality of performance. Self-efficacy beliefs can be successfully raised through a variety of routes, the most effective of which is *experience* (Bandura, 1982). This has important implications for the selection of goals for students and young performers with low self-efficacy beliefs. The goals should be set at a level which almost guarantees success and should be raised only very gradually. Experience of success is very important for the changes in beliefs to take place. Although a small amount of discrepancy between a goal and a current achievemnt level creates self-dissatisfaction and increases motivation to work harder (Bandura and Cervone, 1983), pushing

individuals with low self-efficacy beliefs towards goals which they consider unrealistically high may be damaging.

Pessimism and Optimism are dispositional characteristics which are also related to expectancies of outcomes, so that whilst optimists have a generalised expectancy of good outcomes, the reverse is true for pessimists. Psychological research shows that indeed, *optimists to have better outcomes* than pessimists and this is partly a function of their *different coping strategies.*

Pessimists use as means of coping denial and distancing, focusing on stressful stimuli and disengagement from stressful goals. Optimists, on the other hand, produce elaborate plans for coping, seek social support and emphasise positive aspects of stressful situations. Research shows that *optimism is a prospective predictor of successful adaptation to stressful encounters* (Scheier et al, 1986), and therefore implies that optimists are naturally better equipped to cope with performance anxiety than pessimists.

As the above brief presentation shows, psychological research suggests that such personality traits as neuroticism, trait anxiety, low or uncertain high self-esteem, external locus of control, high social anxiety, low belief in self-efficacy and pessimism are or are very likely to be associated with high levels of performance anxiety and, therefore, may have unfavourable prognosis for success in the performing arts.

The last four decades saw great developments in career guidance and in assessment and selection procedures of a variety of workers, from salesmen to top executives. The aims of these procedures are usually twofold: to choose the people who are most likely to achieve success in a given field, and to establish in which areas they need special training or counselling.

It is surprising, therefore, that although there is a very tough competition in the performing arts professions and very severe criteria are used for passig through various training stages, based on talent, ability and physical suitability, the psychological assessment including personality characteristics is altogether overlooked. Given equal talent and ability, individuals better equipped psychologically to cope with many severe stresses in life and professional activities as performers are more likely to succeed, and those who opt out may be spared many future disappointments. It is a serious responsibility on the part of the educators and parents in guiding the young to consider their psychological profile and vulnerabilities in order to make sound decisions about continuation of training, selection of goals, and about seeking help of a psychologist when indicated.

For those already in the profession and suffering with performance anxiety, psychological assessment would help to establish what type of therapy might be best suited to their individual characteristics and needs and given their psychological make-up what path their future career plans should take.

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YOU CANNOT DO IT ALONE BUT YOU CAN DO IT

AN INTRODUCTION FOR BALLET DANCERS TO ANOREXIA NERVOSA AND BULIMIA

"Recognition, Action and Treatment"

Recognition

The phrase, "Anorexia Nervosa", first coined in 1868, literally means, "lack of appetite of nervous origin". The name is a misnomer—it is rather a fear of fatness, followed by a fear of losing control. Bulimia, meaning "ox hunger" is aptly used to describe the secretive "Binge and Vomit Syndrome", which is an attempt to lose weight by vomiting, excessive exercise, laxatives and diurectics.

Both sexes suffer but males are in the minority.

Anorexia Nervosa is an emotionally based disorder characterised by self-induced starvation. Ballet dancers reflect, to an extreme degree, this obsession with a thin body and there is known to be particularly high incidence of Anorexia and Bulimia amongst professional dancers.

Extreme exercise during adolescent years resulting in prolonged low weight can also cause ammenorrhea. Studies show that delays in menstruation may influence long bone growth, allowing a significantly increased arm span. Research shows up to 7% of professional ballet dancers suffer from Anorexia and 35% engage in some level of Bulimic behaviour.

Action

The Bulimic is often hard to recognise but is more verbose and outgoing than the Anorectic who denies that she has a problem, will not communicate and refuses help. So what can you do?

First, recognise the warning signals—denial of hunger, yet an obsession with food, high tolerance of physical discomfort in someone who is a high achiever but who has very low self-esteem, feelings of guilt and anxiety, becomes secretive and deceitful, depressed and socially withdrawn, usually highly intelligent, a perfectionist who must be in control and will soon be ultra-thin.

Second, take action immediately. The earlier treatment starts, the better is the prospect of a cure.

1. Remove the pressure, e.g. exams, tests, etc.
2. Let her know you are concerned and are there to help, remind her that she is not alone.
3. Be quietly persistent, the problem must be talked about.
4. Warn of the medical complications.
5. Encourage her to seek professional advice, i.e. a doctor, a counsellor who understands, a dietician and a support group.

DON'T force her to eat.
DON'T allow conversations to focus on food or weight.
DON'T say she looks better—she will interpret it as looking fat.
EDUCATE YOURSELF about the facts of Anorexia and Bulimia.

Treatment

Starting treatment early provides a better opportunity of a cure. Treatment is usually long, tedious and exasperating, requiring a trained team working in co-operation with the school or work place. The objective must be to normalise eating patterns, build up the patient's self-esteem and give encouragement; possibly all exercise should stop.

The family should be involved in treatment as they have been party to choosing ballet as a career. The Anorectic uses professional dancing as a perfect vehicle to show her iron determination, self control and perfectionism. Early intervention is the best form of prevention and patients should be made aware of the consequences of an inadequate diet causing their daughters to cease mensturation as their weight falls below 7½ stone. This may be the case for many years in this career. Education regarding nutrition should be an integral part of the dancer's training. Desperate dieting is not an effective method of long term weight control.

Selectors could be trained to recognise prospective Anorectics and could select ballet dancers from "naturally" thin females whose families genetically provide appropriate physique.

I would personally like to see a change back to the female image of 100 years ago, when Degas painted pictures of beautiful and HEALTHY ballet dancers.

Nancy Pearce

Nancy Pearce is Founder Chairman of Anorexic Family Aid. A.F.A., runs a National Information Centre and a self-help group in Norwich, providing membership for professional sufferers.
Anorexic Family Aid National Information Centre
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DIETARY NEEDS OF DANCERS

by Jamie Chandler

An overview of some of the problems faced by dancers in trying to "fit" nutrition into an already busy schedule.

Both male and female dancers have the same ultimate requirement—to have enough energy to meet the strenuous demands of classes and performances. Obviously the exact requirements of a small female dancer will vary from those of a taller male, and within each sex too there will be variations as an increase in lean body weight (muscle) leads to an increased energy (calorie) requirement.

The two main factors that will be considered are (a) Energy and (b) Fluid.

(a) First, let us consider energy: there are three major sources of energy (calorie) in the diet— Alcohol, Fat and Carbohydrate. There are several reasons why neither alcohol nor fat are ideal as the major energy sources in the diet whereas carbohydrate is. Even though the carlorie requirements of many of the girls are not great, if they over-restrict their carbohydrate intake they will run into problems of matching energy supply with demand.

The problems of the underweight dancers will not be considered here but are not insignificant.

The major problem is to match energy supplied to energy used—both from hour to hour and in the long term for weight control. As

mentioned previously, the best source of energy is carbohydrate—an inadequate intake will not permit repletion of glycogen—the fuel on which muscles largely depend to function. Carbohydrate can be basically divided into the unrefined group—cereals, bread, potatoes, pasta and rice, and the refined group—sweets, sweet drinks and other high sugar foods. An over-emphasis on the former group for those with high requirements can lead to the dancer feeling like the snake who has just swallowed a rabbit—whole! This is particularly a problem in a very busy schedule.

Sample meal plans for weight control and higher energy requirements are considered with the emphasis on a high percentage of carbohydrate and the recommendation that refined sources are best after exercise and at the end of meals. The "problem" of many dancers eating late in the evening after performances may actually be a plus factor as muscle glycogen stores replete best immediately after exercise. Protein rich foods (e.g. meat, fish, eggs, cheese, pulses) need to be incorporated into the diet in normal amounts.

If a vitamin is to be taken it should be a single inexpensive multivitamin/mineral tablet. Any individual taking a restricted diet may need special consideration of minerals such as iron and calcium.

(b) Fluid balance provides a number of problems, as losses may be large with resulting impairment of performance, hindered by the fact that thirst may be a poor indicator of hydration status. Additionally, as the level of exercise increases, the rate of fluid absorption decreases and repletion may take some time. One solution may be the introduction of water bottles and encouragement of dancers to take small amounts of fluid at regular intervals. Chilled liquids are absorbed more quickly than warm, but a high sugar concentration reduces fluid absorption.

Rest days are as important as class/performance days as refuelling is taking place particularly on these days.

In summary, dancers diets should be high in carbohydrate, low to moderate in fat, adequate in all nutriets—including water, and, of course enjoyable!

THE MUSICIANS' CLINIC

by Dr. R. M. Pearson

In reponse to the recognition that there was a need in London for the provision of medical advice to instrumental musicians, the Musicians' Clinic was established in 1986. Over 300 patients have been referred since the clinic started. Patients are normally seen after referral by their own general practitioner or another consultant and after their technique has been checked by an experienced teacher. However, in some cases where it is important for the musician to obtain advice as a matter of urgency they are seen at the clinic and a diplomatic letter is sent to their general practitioner. The clinic is under medical supervision and patients are seen first by a consultant physician. Depending on the nature of the problem, the medical consultant may refer the patient to the acupuncturist, ear nose and throat surgeon, neurologist, osteopath, physiotherapist or stress counsellor as necessary. The clinic aims to offer a fully comprehensive specialist service of diagnosis and management of the medical disorders

of instrumental musicians and to provide an ethical and scientifically sound assessment of those problems. Patients are encouraged to bring their instrument with them to the consultation whenever this is practical. The doctor usually communicates with the referring doctor and with the instrumentalist's teacher as appropriate, as well as giving a full explanation to the musician. The majority of patients seen in the clinic have performance-related problems but some patients are seen with general medical conditions or treatment which affect their instrumental performance. The clinic is not part of the National Health Service but runs at cost, the fee covering only the rent of the premises.

The majority of patients seen to date, have been performers on *hand-held* instruments, particularly the violin, viola and clarinet. Of the first eighty musicians seen, their ages ranged from 16—74 (mean 28.9) years. Forty-eight out of eighty were female and forty-two were professionals, thirty-two were at music college or school and one was an amateur. The delay in referral after the onset of symptoms was extraordinarily long in some cases ranging between one week and twelve years (average 24 months). The commonest problem by far is that of *overuse injury*—a much disputed diagnosis which is in any case extraordinarily difficult and time consuming to treat especially when it has become chronic. Other patients with problems related to performing with instruments included those with injuries, often after road or domestic accidents, painless incoordination syndrome, shoulder pain, neck pain, tremors, dental conditions and back pain. In addition some general medical conditions were detected including Parkinson's disease, polymysitis, post-viral syndrome, dislocation of the shoulder, manic depressive illness, emphysema, cervical rib and strokes.

Many people have asked why no Alexander technique therapist is involved in the clinic. The reason is that the majority of patients seen are suffering from organic pathology. While the Alexander technique is very helpful in preventing recurrence of conditions to which faulty posture contributes, it has little place in the relief of symptoms in the acute situation.

Another frequent area of interest to musicians is why the clinic is not held in the presence of an experienced musicians. There are logistic and ethical reasons for this. Firstly, virtually all the musicians seen have already taken the advice of a teacher. Secondly, although poor technique and practice habits are contributors to overuse injuries, they are only partly responsible for those injuries. Lastly, the doctor often needs personal information which would normally only be disclosed within the medical profession.

The most important conclusion after the experience gained in the Musicians' Clinic is the dire consequence of failing to recognise overuse injuries early. If the pain merely only improves but there is still the least detectable tenderness and the musician returns to their instrument too early, then they may be unable to play on their instrument or to use their hands for any other activities such as writing for months or even years. The results of this for young musicians at school or college can be devastating both for their professional and their personal life.

The Musicians' Clinic, 7 Park Crescent, London, W1N 3HE, 01-436 5961

ACTORS WORKSHOP

Conducted by Nina Finburgh

This Workshop looked at some of the circumstances which create tension amongst Actors at Auditions.

Discussion on methods of relieving stress were followed by demonstrations of Sight Reading and Interview techniques, and performance of Audition Pieces.

The demonstrations showed how artists can present their potential ability more creatively when freed from the negative thinking and behaviour which often accompanies these occasions.

DON'T CALL US . . .

Although most actors publicly admit to first night nerves, many in private reveal an even deeper dread of Auditions. Actors, singers and dancers who are competent and confident in performance may suddenly tense up and fail to reveal their true potential when placed in a competitive situation.

Granted that the circumstances on these occasions are hardly conducive to relaxation, an artist's own fears and negative thinking may be an even greater hurdle to overcome. Young performers tend to presume that their artistic ability is being judged—investing far too much on the outcome of one particular interview. Experienced players know that **suitability** for the part to be cast is usually more relevant.

Having to perform a three minute extract from a play—on one's own—is an odd way to exhibit skill in a craft essentially concerned with communication and response. It helps actors to realize that the director is probably more interested in the individual qualities and essence of those he watches, than in their interpretation of the role they have chosen to play. Bearing in mind that the director may be casting a season of plays, it is wise to choose extracts which reveal range and versatility, avoiding over-used, hackneyed pieces.

Film and television auditions often involve the actor in sight reading from unpublished text, minimal information being supplied as to the circumstances and character of the role to be read. Fear of making mistakes inhibits many performers who keep their faces buried in the script. It requires courage to take one's eye off the page, but how else can an actor visually communicate the emotion and character of the role he is reading? At least if he is interesting the director may remember him in the future should he be unsuitable for the part to be cast that day.

Almost all auditions include an interview with the dreaded question "Well, what have you been doing recently?" to someone who may have been out of work for many months. Memories of past criticism, disappointments or rejections produce a negative response. It helps artists to rehearse talking about themselves in a positive way, avoiding the temptation to diminish their past experience.

Those who have reached the top in one area of the performing arts are usually understandably nervous about approaching another—especially

under the spotlight of media exposure. Pop stars, Light Entertainment artists and dancers are all disciplined exponents of their own skills. Once they stop focusing on their inexperience and possible inadequacy, their talent as communicators within their own art form can be creatively channelled through the new medium.

Acting demands acute concentration and the discipline to remain involved in the moment to moment changes within the text. Indulging in self-criticism during performance is distracting. Perhaps the judgement an artist should most fear may be his own!

Nina Finburgh
R.A.M. (dip) Hons; L.R.A.M.; I.P.A.

Book Reviews . . .

PRESSURE SENSITIVE

Popular Musicians under Stress

by Dr. Geoff Wills and Prof. Cary Cooper

Sage Publications, 1988 Price £8.95 (Paperback)

The majority of academic literature written about the psychology of music has concerned classical music and musicians. It may be that classical music is more academically respectable, or that it is a majority taste with academics, or simply that it has been regarded as the "norm" for so long.

Serious musicians working in other fields—jazz, rock, popular music, folk etc.—must see this situation as something of a slight to their professional status. It is very welcome, therefore, to be able to review a readable, thorough and academically sound book that for once does the popular musician full justice. Its style is pitched at the "popular psychology" level, meaning that it can be read both by academics and as a general interest book needing no previous knowledge of psychology. Its authors are both respected psychologists: Prof. Cary Cooper an acknowledged authority on stress, and Dr. Geoff Wills, Principal Clinical Psychologist for the Stockport Health Authority.

The initial chapters provide a useful over-view of stress at work and an interesting comprehensive review entitled "Musicians under stress—a review of the literature". Since the literature to date is almost entirely based on classical musicians, the question is posed as to the validity, or not, of drawing comparisons between the stress problems encountered by classical musicians and those experienced by popular musicians. The point here is that while some stressors are likely to apply equally to the popular musician, they have previously only been inferred rather than proved. The authors make it clear that "In an intensive search of the literature we were able to trace only one academic study of occupational stress in professional popular musicians."

The later chapters then go on to fill this gap, and it is these that are of direct interest to the popular musician and psychologist alike. They

contain a survey of popular musicians carried out by Geoff Wills through the Musicians Union, based on interviews and a lengthy questionaire. This forms the basic research value of the book, and contains a wealth of statistics on the working lives of popular musicians, as well as interviews with several prominent professionals.

The research itself was carried out on a sample of 64 jazz musicians, 106 pop musicians and 76 commercial musicians, fairly evenly distributed between main instruments. It proposes a number of different stressors, and indicates their frequency and magnitude within the sample, going on to predict the likely health risks that might result. A list of 53 different stressors is included, which musicians were asked to rate on a scale of 1—5. Tables present the stressors in rank order, every stressor on the list being rated by some musicians as being highly stressful.

The highest stressors were: *keeping up musical standards; instruments not working; reading and playing difficult parts; lack of work; inadequate rehearsals,* and *the effects of loud music.* It is clear from the research that factors intrinsic to the job produced the highest source of pressure overall. The popular musicians' overriding concern is with his playing, his performance, and the situation and circumstances of his performance.

The subjects of this book, as expressed in their own words, are seen in reality to have many common factors both with their classical colleagues and with other professionals doing stressful jobs, and they are a lot more down-to-earth than their showbiz images would have us believe. "Any musician will tell you that playing is 95 per cent frustration and five per cent you feel O.K. about", says one, while another adds: "I don't regret becoming a musician, but it is a life fraught with pressures—I had a peptic ulcer at 21—and the average span of a musician's active life is short."

The raw data of the research is fleshed out by a number of highly revealing interviews with working professionals. Geoff Wills is himself a drummer and a working semi-professional musician, and clearly he understands the realities of what he is dealing with. In consequence his subjects open up and talk frankly about how they see the music world: the problems and difficulties they express jump right off the page as being typical of the life-style of the popular musician.

Given the obvious tensions in following a career which is financially insecure and exposed to all sorts of pressures—drugs and alcohol, reliance on one's own talent and capacity of self-protection, exposure to public and media pressure—it is hardly surprising that there is a thread of bitterness going through the book over how the popular musician is perceived by others. "I dislike people who think that music isn't a real job", says one subject, "I tell them I'm a brain surgeon during the day."

Reading the book makes it clear that the popular musician has a greater claim to being generally misunderstood than his classical colleagues, and that this in itself is a stressor. To the media he is a creature of glitz and glamour, to the man in the street he may be "regarded as being one step up the social ladder from rapists and muggers", as another subject puts it, adding that "it's this 'alienation' from the non-musician that creates most of the problems". This theme occurs again and again:

"A broadly based anxiety from which the popular musician suffers is caused by the ignorance of the public, and the low self-esteem in which society generally holds popular music . . . the public judge a musician only by the money he earns. If he's rich, he's a great man. If he's poor, he's a time-wasting parasite who should get a 'real' job!"

The book shows clearly that popular musicians are carrying out a hard and worthwhile job, that effects of stress and performance anxiety form one of the main predictors of ill health, and that despite all this they still tend to be treated as second class citizens when compared to their classical colleagues. It finishes with a plea for more effective stress management, and refers to organizations such as ISSTIP who are working towards this.

"Pressure Sensitive" is an eloquent and informed defense of the needs of the popular musician, and makes the point that "it is not entirely necessary for the popular musician to be simply either a happy vegetable or a neurotic artist." It is a comprehensive, well researched book covering an area of stress within performance that has been neglected for far too long. In the foreword, Rick Wakeman states "Nobody ever really understands what makes a musician tick." This book takes the reader one step closer to that understanding.

Andrew Evans and **Martin Lloyd-Elliott**

Musicians and counselling psychologists, founders of Arts Psychology Consultants, established to provide a specialised counselling and therapy service for musicians and performers.

INTRODUCTION TO THE MUSICAL BRAIN

by Don G. Campbell

Pub. MMB Music/Schott 160pp

How is the "unteachable" part of music—the combination of sensitivity, creativity, awareness and co-ordination known as "talent"—to be cultivated? This book, only partly a survey of the limited knowledge available on the function of the brain, seeks answers to that question. Particular emphasis is laid on the non-rational aspect, named 'right-brain' function by some theorists, which provides the essential foundation of musical response. That response is wide-spread, as the pianist Lorin Hollander puts it: "All of us as children had it. Many of us have regained it." His account, quoted in the book, of primal musical experience is a vivid description of what is too often lost in training. Without this "humus of the spirit" (Orff) nothing can grow.

The author was a pupil of Nadia Boulanger, whose insistence on awareness is legendary, and in his search for ways of awakening musical response investigated, amoung others, Dalcroze (whose aim was to enable pupils to say, not "I know" but "I have experienced" and Orff, who insisted on the universality of fundamental musical experience. His own approach can be summed up in the Chinese proverb he quotes: "Tell me, I'll forget; show me, I may remember; involve me, I'll understand." Various 'exercises' are given; creative teachers will probably prefer to invent their own along the lines suggested rather than slavishly following the examples. Mr.

Campbell does not underestimate the imporatance of intellect, but seeks a synthesis of intellect and emotion: "What's missing from our education efforts? The *feeling* brain." His approach seems a facet of a perennial philosophy: in Chinese calligraphy one and the same character can be interpreted either as 'mind' or 'heart'.

Simon Nicholls

Professor Royal College of Music
Pianist, Lecturer

MUSICAL MAESTROS

by **Irene Samuel**
Publishers: Roster 191 pp. £8.95 (paperback)

"Never judge a book by its cover"—the old adage is especially true in this case. The presentaion is tacky and aimed at the wrong public, but inside is a fascinatingly informative collection of opinions and experiences from over a hundred well-known musicians on coping with the pressure of performance. The views expressed and advice given are down-to-earth and practical for the most part and always thought provoking. Recommended reading for all considering entering the profession and for their teachers.

Simon Nicholls

STOP PRESS

ISSTIP SEMINARS

Sunday, 18th June, 1989

Guildhall School, The Barbican, London, EC2Y 8DT
(By kind permisson of the Principal)
Carola Grindea and Kato Havas
Lectures, Demonstrations and Master Classes

Sunday, 23rd July, 1989
2.30—4.30 p.m.

School of Music, Kingston Polytechnic
Nina Finburgh
"Preliminary Report on Survey of Actors Problems"
Dr. Richard Pearson
"Medical Aspects of Selection of Students for Music and Dance Schools"
Choreographic Illustrations: Nichola Keay

Details from the Secretary